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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,748	02/11/2004	Masaru Sawada		3610

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EXAMINER

MERCEDES, DISMERY E

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/776,748		SAWADA ET AL.	
	Examiner		Art Unit	
	Dismery E Mercedes		2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/11/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on February 11, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. Figures 1A and Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "15", "16" of Figure 1B. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action.

The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "240" and "72" have both been used to designate "frequency offset detector" in FIG.8. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5,12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (pages 1-4 of the instant specification), hereinafter, Sugawara et al. (JP 2003-016734), in view of Vis et al. (US 6, 530,060 B1).

As to Claim 1, AAPA discloses a an information recording/reading apparatus that reads information from a recording medium at a timing synchronized with a read signal by reproducing a clock used when recording the information with timing reproduction data (as depicted in FIG8, “100” of instant specification), comprising: a signal delay unit that delays signal data read from the recording medium for a predetermined time (as depicted in FIG.8, “62” & page 2, lines 13-17, of the instant specification); and a frequency offset detecting unit that detects; during the predetermined time, a frequency offset that is a frequency difference between a clock of the read signal and an operation clock of the information recording/reading apparatus using the timing reproduction data that is split and recorded in the recording medium (as depicted in FIG.8, “frequency offset detector” as depicted in FIG.8 & page 3, lines 13-17 of instant specification).

AAPA fails to particularly disclose the signal data having the timing reproduction data that is split and recorded in the recording medium by setting a middle portion of the timing reproduction data as an area for recording the information.

However, Vis et al. discloses such (as depicted in Figures 5A-5B & col.10, lines 28-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made, to have implement split-data filed sector to facilitate detecting boundary error events of the embedded fields. Also Vis et al. teaches that a secondary preamble is typically used to obtain appropriate gain and timing information before detecting a secondary sync mark (see col.10, lines 20-21, 54-57 of Vis et al.).

As to Claim 2, AAPA further discloses the timing reproduction data is cyclic waveform data, and a phase of the timing reproduction data that is split and recorded in the recording medium is continuous (page 2, lines 15-17 & page 1, lines 24- page 2 line 2).

As to Claim 3, the combination of AAPA and Vis et al. further discloses 3. The information recording/reading apparatus according to claim 2, wherein the timing reproduction data is divided into a plurality of blocks (as depicted in Figures 5A-5C of Vis et al.), and the frequency offset detecting unit detects the frequency offset based on a difference between a phase difference of a cyclic waveform of a leading block from a reference waveform and a phase difference of a cyclic waveform of an ending block from the reference waveform (as depicted in Figure 8, “ frequency offset detector” of instant specification).

As to Claim 4, AAPA further discloses a recording unit that splits the timing reproduction data and records the timing reproduction data split in the recording medium (abstract, of Sugawara et al.).

As to Claim 5, Vis et al. further discloses wherein sync data for recognizing a leading position of the information and the information are recorded between the timing reproduction data that is split and recorded in the recording medium (as depicted in Figure 5B).

As to Claims 11-15 are drawn to a method corresponding to the apparatus of claims 1-5, are rejected for similar reasons set forth in the rejection of claims 1-5, supra.

7. Claims 6-10 are rejected as being unpatentable over Applicant's Admitted Prior Art (pages 1-4 of the instant specification), hereinafter, Sugawara et al. (JP 2003-016734), in view of Vis et al. (US 6, 530,060 B1).

AAPA discloses a an information recording/reading apparatus that reads information from a recording medium at a timing synchronized with a read signal by reproducing a clock used when recording the information with timing reproduction data (as depicted in FIG8, “100” of instant specification), comprising: a signal delay unit that delays signal data read from the recording medium

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for a predetermined time (as depicted in FIG.8, "62" & page 2, lines 13-17, of the instant specification); and a frequency offset detecting unit that detects; during the predetermined time, a frequency offset that is a frequency difference between a clock of the read signal and an operation clock of the information recording/reading circuits using the timing reproduction data that is split and recorded in the recording medium (as depicted in FIG.8, "frequency offset detector" as depicted in FIG.8 & page 3, lines 13-17 of instant specification).

AAPA fails to particularly disclose the signal data having the timing reproduction data that is split and recorded in the recording medium by setting a middle portion of the timing reproduction data as an area for recording the information.

However, Vis et al. discloses such (as depicted in Figures 5A-5B & col.10, lines 28-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made, to have implement split-data filed sector to facilitate detecting boundary error events of the embedded fields. Also Vis et al. teaches that a secondary preamble is typically used to obtain appropriate gain and timing information before detecting a secondary sync mark (see col.10, lines 20-21, 54-57 of Vis et al.).

As to Claims 7-10, they have limitations similar to those treated in the above rejections, and are met by the references as set forth in the rejection of claims 2-5, supra.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Leis et al. (US 5,036,408) discloses a high efficiency disk format and synchronization system.
- Gold (US 5,475,540) discloses a magnetic data storage disk drive with data block sequencing by using ID fields after embedded servo sectors.

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- Malone, Sr. (US 6,583,943 B2) discloses a system and method for providing nonadjacent redundancy synchronization bytes.
- Sugawara et al. (US 2003/0030930 A1) discloses an information recording and reproducing apparatus signal decoding circuit and information recording medium and method.
- Reddy et al. (US 6,295,176 B1) discloses an apparatus and process for identifying sectors in a headerless sector data track.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E Mercedes whose telephone number is 571-272-7558. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dismery E Mercedes
Examiner
Art Unit 2651

DM

DM . 3/24/05


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600